# Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

### 1.1. Product identifier

**Trade name/designation:**

RAVENOL Motobike 4-T Ester SAE 10W-50

**Article No.:**
1171103

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Use of the substance/mixture:**
Lubricant

* ### 1.3. Details of the supplier of the safety data sheet

**Supplier (manufacturer/importer/only representative/downstream user/distributor):**

**Ravensberger Schmierstoffvertrieb GmbH**
Produktsicherheit
Jöllenbecker Str. 2
33824 Werther
Germany
**Telephone:** +49 5203 9719 0
**Telefax:** +49 5203 9719 40
**E-mail:** kontakt@ravenol.de
**Website:** www.ravenol.de

**E-mail (competent person):** sdb@ravenol.de

* ### 1.4. Emergency telephone number

24 hr. emergency phone number, 24h: +1 872 5888271 (Contract ID: RAV)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008 [CLP]**

| Hazard classes and hazard categories | Hazard statements | Classification procedure |
|---|---|---|
| Hazardous to the aquatic environment *(Aquatic Chronic 3)* | H412: Harmful to aquatic life with long lasting effects. | Calculation method. |

* ### 2.2. Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

**Hazard components for labelling:**
Phenol, dodecyl-, branched

| Hazard statements for environmental hazards | |
|---|---|
| H412 | Harmful to aquatic life with long lasting effects. |

| Supplemental hazard information | |
|---|---|
| EUH210 | Safety data sheet available on request. |

| Precautionary statements Prevention | |
|---|---|
| P273 | Avoid release to the environment. |

| Precautionary statements Disposal | |
|---|---|
| P501 | Dispose of contents/container to an appropriate recycling or disposal facility. |

### 2.3. Other hazards

**Other adverse effects:**
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

# SECTION 3: Composition/information on ingredients

* 
## 3.2. Mixtures

**Hazardous ingredients / Hazardous impurities / Stabilisers:**

| Product identifiers | Substance name<br>Classification according to Regulation (EC) No 1272/2008 [CLP] | Concentration |
|---|---|---|
| CAS No.: 4259-15-8<br>EC No.: 224-235-5<br>REACH No.:<br>01-2119493635-27 | **zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)**<br>Aquatic Chronic 2 (H411), Eye Dam. 1 (H318)<br>  Danger<br>**Acute Toxicity Estimate**<br>ATE (oral) 3,100 mg/kg<br>ATE (dermal) > 5,000 mg/kg | 0 – < 1<br>weight-% |
| CAS No.: 121158-58-5<br>EC No.: 310-154-3<br>Index No.: 604-092-00-9<br>REACH No.:<br>01-2119513207-49 | **Phenol, dodecyl-, branched**<br>*Candidate List of Substances of Very High Concern for Authorisation!*<br>Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410), Eye Dam. 1 (H318), Repr. 1B (H360F), Skin Corr. 1C (H314)<br>  Danger<br>M-factor (acute): 10 M-factor (chronic): 10<br>**Acute Toxicity Estimate**<br>ATE (oral) 2,100 – 2,200 mg/kg<br>**Additional information:** This substance has endocrine disrupting properties with respect to humans. This substance has endocrine disrupting properties with respect to non-target organisms. | 0 – < 0.2<br>weight-% |
| CAS No.: 122-39-4<br>EC No.: 204-539-4<br>REACH No.:<br>01-2119488966-13 | **diphenylamine**<br>Acute Tox. 3 (H301, H311, H331), Aquatic Chronic 1 (H410), STOT RE 2 (H373)<br>  Danger<br>**Acute Toxicity Estimate**<br>ATE (oral) 1,120 mg/kg<br>ATE (dermal) 300 mg/kg<br>ATE (inhalation, vapour) 3 mg/L<br>ATE (inhalation, dust/mist) 0.5 mg/L | 0 – < 0.08<br>weight-% |

*Full text of H- and EUH-phrases: see section 16.*

# SECTION 4: First aid measures

## 4.1. Description of first aid measures

**General information:**
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious but breathing normally, place in recovery position and seek medical advice. Do not leave affected person unattended.

**Following inhalation:**
Provide fresh air. Consult a doctor immediately.

**In case of skin contact:**
After contact with skin, wash immediately with plenty of water and soap. Consult a doctor immediately.

**After eye contact:**
In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

**Following ingestion:**
Rinse mouth thoroughly with water. Do NOT induce vomiting. Consult a doctor immediately.

**Self-protection of the first aider:**
Use personal protection equipment. No direct artificial respiration to be given by first aider.

## 4.2. Most important symptoms and effects, both acute and delayed

No known symptoms to date.

## 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Observe risk of aspiration if vomiting occurs.

# SECTION 5: Firefighting measures

## 5.1. Extinguishing media

**Suitable extinguishing media:**
Co-ordinate fire-fighting measures to the fire surroundings.

Carbon dioxide (CO2)
Extinguishing powder
alcohol resistant foam
Use water spray jet to protect personnel and to cool endangered containers.

**Unsuitable extinguishing media:**
Full water jet

### 5.2. Special hazards arising from the substance or mixture
During heating or in case of fire, toxic gases is possible.
The formation of combustible vapours is possible at temperatures above: Flash point

**Hazardous combustion products:**
Carbon monoxide, Carbon dioxide (CO2), Nitrogen oxides (NOx),
During heating or in case of fire, toxic gases is possible.

### 5.3. Advice for firefighters
In case of fire: Wear self-contained breathing apparatus. Protective clothing.

### 5.4. Additional information
Do not inhale explosion and combustion gases. Move undamaged containers from immediate hazard area if it can be done safely. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

## SECTION 6: Accidental release measures

* 
### 6.1. Personal precautions, protective equipment and emergency procedures
#### 6.1.1. For non-emergency personnel
**Personal precautions:**
Use personal protection equipment. Special danger of slipping by leaking/spilling product.

**Protective equipment:**
Personal protection equipment: see section 8

**Emergency procedures:**
Eliminate all ignition sources if safe to do so. Remove persons to safety. Provide adequate ventilation.

#### 6.1.2. For emergency responders
**Personal protection equipment:**
Use personal protection equipment.

### 6.2. Environmental precautions
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

### 6.3. Methods and material for containment and cleaning up
**For containment:**
Suitable material for taking up: Sand, Kieselguhr, Universal binder, Chemical binding agents, containing acids
Prevent spread over a wide area (e.g. by containment or oil barriers).

**For cleaning up:**
Remove from the water surface (e.g. skimming, sucking). Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

**Other information:**
Treat the recovered material as prescribed in the section on waste disposal.

### 6.4. Reference to other sections
Safe handling: see section 7
Disposal: see section 13
Personal protection equipment: see section 8

### 6.5. Additional information
Clear spills immediately. Use appropriate container to avoid environmental contamination.

# SECTION 7: Handling and storage

## * 7.1. Precautions for safe handling

### Protective measures

**Advices on safe handling:**
Wear personal protection equipment (refer to section 8).
When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Do not put any product-impregnated cleaning rags into your trouser pockets. Clear spills immediately. Use appropriate container to avoid environmental contamination.

**Fire prevent measures:**
No special fire protection measures are necessary.

**Environmental precautions:**
Shafts and sewers must be protected from entry of the product.

### Advices on general occupational hygiene

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

## 7.2. Conditions for safe storage, including any incompatibilities

**Technical measures and storage conditions:**
Keep container tightly closed in a cool, well-ventilated place.

**Requirements for storage rooms and vessels:**
Suitable container/equipment material: Floors should be impervious, resistant to liquids and easy to clean. Shafts and sewers must be protected from entry of the product.
Keep/Store only in original container.

**Hints on storage assembly:**
not required

**Storage class (TRGS 510, Germany):** 10 – Combustible liquids that cannot be assigned to any of the above storage classes

**Further information on storage conditions:**
Store in a cool dry place. Keep away from heat.

## 7.3. Specific end use(s)

**Recommendation:**
Observe technical data sheet.

# SECTION 8: Exposure controls/personal protection

## * 8.1. Control parameters

### 8.1.1. Occupational exposure limit values

| **Limit value type (country of origin)** | **Substance name** | **① Long-term occupational exposure limit value<br>② Short-term occupational exposure limit value<br>③ Instantaneous value<br>④ Monitoring and observation processes<br>⑤ Remark** |
|---|---|---|
| DFG (DE)<br>from 10 Oct 2023 | **zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)**<br>CAS No.: 4259-15-8<br>EC No.: 224-235-5 | ① 0.1 mg/m³<br>② 0.4 mg/m³<br>⑤ (Verbindungen, anorganisch; alveolengängige Fraktion) |
| DFG (DE)<br>from 10 Oct 2023 | **zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)**<br>CAS No.: 4259-15-8<br>EC No.: 224-235-5 | ① 2 mg/m³<br>② 4 mg/m³<br>⑤ (Verbindungen, anorganisch; einatembare Fraktion) |
| CH<br>from 1 Jan 2024 | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³<br>⑤ (einatembare Fraktion; Dampf und Aerosol; kann über die Haut aufgenommen werden) H SSC; Messmeth: NIOSH OSHA |
| BE | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³ |

| Limit value type (country of origin) | Substance name | ① Long-term occupational exposure limit value<br>② Short-term occupational exposure limit value<br>③ Instantaneous value<br>④ Monitoring and observation processes<br>⑤ Remark |
|---|---|---|
| CZ<br>from 1 Mar 2020 | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³<br>② 20 mg/m³<br>⑤ (může pronikat pokožkou) D |
| NO | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 5 mg/m³ |
| IE | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³<br>② 20 mg/m³ |
| MY<br>from 1 Jan 2000 | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³ |
| HTP (FI) | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 5 mg/m³<br>② 10 mg/m³ |
| LT | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 4 mg/m³<br>② 12 mg/m³<br>⑤ |
| SE | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 4 mg/m³<br>③ 12 mg/m³ |
| MAK (AT) | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 0.7 ppm (5 mg/m³)<br>⑤ (einatembare Fraktion, kann über die Haut aufgenommen werden) H |
| MAK (AT) | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ② 1.4 ppm (10 mg/m³)<br>⑤ (einatembare Fraktion, max. 4x15 min./Schicht, kann über die Haut aufgenommen werden) H |
| DK | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 5 mg/m³<br>② 10 mg/m³ |
| BG | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³ |
| HR | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³<br>② 20 mg/m³ |
| RO | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 4 mg/m³<br>② 6 mg/m³ |
| EE | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³ |
| Alberta (CA) | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³ |
| ES | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³<br>⑤ s |
| BC (CA) | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³ |
| VLA (FR) | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³ |
| WEL (GB) | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³<br>② 20 mg/m³ |

| Limit value type (country of origin) | Substance name | ① Long-term occupational exposure limit value<br>② Short-term occupational exposure limit value<br>③ Instantaneous value<br>④ Monitoring and observation processes<br>⑤ Remark |
|---|---|---|
| SI<br>from 4 Dec 2018 | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 5 mg/m³<br>② 10 mg/m³<br>⑤ (frakcija ki jo je mogoče vdihniti, računati je treba z možnostjo prodiranja skozi kožo) K, Y |
| TW | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³ |
| KR | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³ |
| IS | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 5 mg/m³ |
| CN<br>from 1 Jan 2007 | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³ |
| GR<br>from 1 Oct 2016 | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³<br>② 20 mg/m³ |
| TRGS 900 (DE)<br>from 29 Mar 2019 | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 5 mg/m³<br>② 10 mg/m³<br>⑤ (kann über die Haut aufgenommen werden) DFG, Y, H |
| PL<br>from 12 Jun 2018 | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 8 mg/m³<br>⑤ (wdychalna frakcja) |
| CSV (JP)<br>from 1 Apr 2024 | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 5 mg/m³ |
| NIOSH (US) | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³ |
| ACGIH (US) | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³ |
| Québec (CA) | **diphenylamine**<br>CAS No.: 122-39-4<br>EC No.: 204-539-4 | ① 10 mg/m³ |

### 8.1.2. Biological limit values

No data available

### 8.1.3. DNEL-/PNEC-values

| Substance name | DNEL value | ① DNEL type<br>② Exposure route |
|---|---|---|
| **zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)**<br>CAS No.: 4259-15-8<br>EC No.: 224-235-5 | 6.6 mg/m³ | ① DNEL worker<br>② Long-term – inhalation, systemic effects |
| **Phenol, dodecyl-, branched**<br>CAS No.: 121158-58-5<br>EC No.: 310-154-3 | 44.18 mg/m³ | ① DNEL worker<br>② Acute - inhalation, systemic effects |
| **Phenol, dodecyl-, branched**<br>CAS No.: 121158-58-5<br>EC No.: 310-154-3 | 0.25 mg/kg | ① DNEL worker<br>② Long-term - dermal, systemic effects |

| Substance name | DNEL value | ① DNEL type<br>② Exposure route |
|---|---|---|
| **Phenol, dodecyl-, branched**<br>CAS No.: 121158-58-5<br>EC No.: 310-154-3 | 166 mg/kg | ① DNEL worker<br>② Acute – dermal, systemic effects |

| Substance name | PNEC Value | ① PNEC type |
|---|---|---|
| **Phenol, dodecyl-, branched**<br>CAS No.: 121158-58-5<br>EC No.: 310-154-3 | 0.074 µg/L | ① PNEC aquatic, freshwater |
| **Phenol, dodecyl-, branched**<br>CAS No.: 121158-58-5<br>EC No.: 310-154-3 | 0.0074 µg/L | ① PNEC aquatic, marine water |
| **Phenol, dodecyl-, branched**<br>CAS No.: 121158-58-5<br>EC No.: 310-154-3 | 100 mg/L | ① PNEC sewage treatment plant |
| **Phenol, dodecyl-, branched**<br>CAS No.: 121158-58-5<br>EC No.: 310-154-3 | 0.226 mg/kg | ① PNEC sediment, freshwater |
| **Phenol, dodecyl-, branched**<br>CAS No.: 121158-58-5<br>EC No.: 310-154-3 | 0.0266 mg/kg | ① PNEC sediment, marine water |
| **Phenol, dodecyl-, branched**<br>CAS No.: 121158-58-5<br>EC No.: 310-154-3 | 0.37 µg/L | ① PNEC aquatic, intermittent release |

* ## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

See section 7. No additional measures necessary.

### 8.2.2. Personal protection equipment

**Eye/face protection:**

During transfer: Eye glasses with side protection
Wear eye/face protection. EN 166

**Skin protection:**

Hand protection
Suitable material: NBR (Nitrile rubber), PVC (polyvinyl chloride), CR (polychloroprene, chloroprene rubber)
Thickness of the glove material: ≥ 0,4 mm
Breakthrough time: 480 min
Breakthrough times and swelling properties of the material must be taken into consideration.
The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
Tested protective gloves must be worn: EN ISO 374
Suitable protective clothing: Protective clothing

**Respiratory protection:**

Usually no personal respirative protection necessary.

### 8.2.3. Environmental exposure controls

See section 7. No additional measures necessary.

## SECTION 9: Physical and chemical properties

* ## 9.1. Information on basic physical and chemical properties

### Appearance

**Physical state:** Liquid
**Colour:** tawny
**flammability:** Yes
**Form:** Liquid
**Odour:** characteristic

### Safety relevant basis data

| Parameter | Value | at °C | ① Method<br>② Remark |
|---|---|---|---|
| pH | *not applicable* | | |
| Melting point | *No data available* | | |
| Freezing point | *No data available* | | |
| Initial boiling point and boiling range | *No data available* | | |
| Flash point | 248 °C | | |
| Evaporation rate | *No data available* | | |
| Auto-ignition temperature | *No data available* | | |
| Upper/lower flammability or explosive limits | *No data available* | | |
| Vapour pressure | *No data available* | | |
| Vapour density | *No data available* | | |
| Density | 858 kg/m³ | 15 °C | |
| Bulk density | *not applicable* | | |
| Water solubility | practically insoluble | | |
| Dynamic viscosity | *No data available* | | |
| Kinematic viscosity | 121 mm²/s | 40 °C | |

* **9.2. Other information**

Not applicable

## SECTION 10: Stability and reactivity

* **10.1. Reactivity**

No known hazardous reactions.

**10.2. Chemical stability**

The mixture is chemically stable under recommended conditions of storage, use and temperature.

**10.3. Possibility of hazardous reactions**

No hazardous reaction when handled and stored according to provisions.

**10.4. Conditions to avoid**

To avoid thermal decomposition do not overheat.

**10.5. Incompatible materials**

Materials to avoid: Acid, Oxidising agent, Reducing agent

* **10.6. Hazardous decomposition products**

Hazardous combustion products: Carbon monoxide, Carbon dioxide (CO2), Nitrogen oxides (NOx), During heating or in case of fire, toxic gases is possible.

**Further information**

No information available.

## SECTION 11: Toxicological information

* **11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

| |
|---|
| **zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)** CAS No.: 4259-15-8 EC No.: 224-235-5 |
| **$LD_{50}$ oral:** 3,100 mg/kg (rats) |
| **$LD_{50}$ dermal:** >5,000 mg/kg (rabbits) |
| **Phenol, dodecyl-, branched** CAS No.: 121158-58-5 EC No.: 310-154-3 |
| **$LD_{50}$ oral:** 2,100 – 2,200 mg/kg (rat) |
| **$LD_{50}$ dermal:** 15,000 mg/kg (rabbit) |
| **diphenylamine** CAS No.: 122-39-4 EC No.: 204-539-4 |
| **$LD_{50}$ oral:** 1,120 mg/kg |

**Acute oral toxicity:**

Based on available data, the classification criteria are not met.

**Acute dermal toxicity:**

Based on available data, the classification criteria are not met.

**Acute inhalation toxicity:**
Based on available data, the classification criteria are not met.

**Skin corrosion/irritation:**
Based on available data, the classification criteria are not met.

**Serious eye damage/irritation:**
Based on available data, the classification criteria are not met.

**Respiratory or skin sensitisation:**
Based on available data, the classification criteria are not met.

**Germ cell mutagenicity:**
Based on available data, the classification criteria are not met.

**Carcinogenicity:**
Based on available data, the classification criteria are not met.

**Reproductive toxicity:**
Based on available data, the classification criteria are not met.

**STOT-single exposure:**
Based on available data, the classification criteria are not met.

**STOT-repeated exposure:**
Based on available data, the classification criteria are not met.

**Aspiration hazard:**
Observe risk of aspiration if vomiting occurs.
For viscosity data, see section 9.

**Additional information:**
Frequently or prolonged contact with skin may cause dermal irritation.

### * 11.2. Information on other hazards

**Endocrine disrupting properties:**
This product contains a substance that has endocrine disrupting properties with respect to humans.

**Other information:**
No data available.

## SECTION 12: Ecological information

### * 12.1. Toxicity

| |
|---|
| **zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)** CAS No.: 4259-15-8 EC No.: 224-235-5 |
| **$LC_{50}$:** 4.4 mg/L 4 d (fish, rainbow trout) OECD 203 |
| **$LC_{50}$:** 75 mg/L 2 d (crustaceans, Daphnia magna) OECD 202 |
| **NOEC:** 32 mg/L 2 d (crustaceans, Daphnia magna) OECD 202 |
| **NOEC:** 220 mg/L 3 d (Algae/water plant, Scenedesmus subspicatus) OECD 201 |
| **$ErC_{50}$:** 410 mg/L 3 d (Algae/water plant, Scenedesmus subspicatus) OECD 201 |
| **Phenol, dodecyl-, branched** CAS No.: 121158-58-5 EC No.: 310-154-3 |
| **$LC_{50}$:** ≥40 mg/L 2 d (fish) |
| **$LC_{50}$:** ≥0.58 – 0.58 mg/L 4 d (crustaceans) |
| **NOEC:** ≥0.07 mg/L 3 d (Algae/water plant) |
| **diphenylamine** CAS No.: 122-39-4 EC No.: 204-539-4 |
| **$LC_{50}$:** 3.79 mg/L 4 d (fish) |
| **$LC_{50}$:** 2.2 mg/L 2 d (fish) |
| **$EC_{50}$:** 1.16 mg/L 2 d (crustaceans) |
| **$EC_{50}$:** 2.17 mg/L 3 d (Algae/water plant) |
| **$EC_{50}$:** 0.31 mg/L 2 d (crustaceans, Wasserfloh) |
| **$EC_{50}$:** 1.51 mg/L 3 d (Algae/water plant, Grünalgen) |

**Aquatic toxicity:**
Harmful to aquatic life with long lasting effects.

**Assessment/classification:**
The product has not been tested.

**Additional ecotoxicological information:**
Do not allow uncontrolled discharge of product into the environment.

* ## 12.2. Persistence and degradability

**Biodegradation:**
Not readily biodegradable (according to OECD criteria)

* ## 12.3. Bioaccumulative potential

| | |
|---|---|
| **Phenol, dodecyl-, branched** CAS No.: 121158-58-5 EC No.: 310-154-3 | |
| **Log $K_{OW}$:** 7.14 | |
| **diphenylamine** CAS No.: 122-39-4 EC No.: 204-539-4 | |
| **Log $K_{OW}$:** 3.4 | |

**Accumulation / Evaluation:**
The product has not been tested.

## 12.4. Mobility in soil
The product has not been tested.

* ## 12.5. Results of PBT and vPvB assessment

| | |
|---|---|
| **zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)** CAS No.: 4259-15-8 EC No.: 224-235-5 | |
| **Results of PBT and vPvB assessment:** This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. | |
| **Phenol, dodecyl-, branched** CAS No.: 121158-58-5 EC No.: 310-154-3 | |
| **Results of PBT and vPvB assessment:** This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. | |
| **diphenylamine** CAS No.: 122-39-4 EC No.: 204-539-4 | |
| **Results of PBT and vPvB assessment:** This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. | |

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

* ## 12.6. Endocrine disrupting properties
This product contains a substance that has endocrine disrupting properties with respect to non-target organisms.

## 12.7. Other adverse effects
No data available.

# SECTION 13: Disposal considerations

* ## 13.1. Waste treatment methods
Dispose of waste according to applicable legislation.

### Waste treatment options

**Appropriate disposal / Product:**
Dispose of waste according to applicable legislation.

**Appropriate disposal / Package:**
Non-contaminated packages may be recycled.

**Other disposal recommendations:**
Consult the appropriate local waste disposal expert about waste disposal.

## 13.2. Additional information
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

# SECTION 14: Transport information

| Land transport (ADR/RID) | Inland waterway craft (ADN) | Sea transport (IMDG) | Air transport (ICAO-TI / IATA-DGR) |
|---|---|---|---|
| **14.1. UN number or ID number** | | | |
| No dangerous good in sense of these transport regulations. | No dangerous good in sense of these transport regulations. | No dangerous good in sense of these transport regulations. | No dangerous good in sense of these transport regulations. |
| **14.2. UN proper shipping name** | | | |
| No dangerous good in sense of these transport regulations. | No dangerous good in sense of these transport regulations. | No dangerous good in sense of these transport regulations. | No dangerous good in sense of these transport regulations. |
| **14.3. Transport hazard class(es)** | | | |
| not relevant | not relevant | not relevant | not relevant |

| Land transport (ADR/RID) | Inland waterway craft (ADN) | Sea transport (IMDG) | Air transport (ICAO-TI / IATA-DGR) |
|---|---|---|---|
| **14.4. Packing group** | | | |
| not relevant | not relevant | not relevant | not relevant |
| **14.5. Environmental hazards** | | | |
| not relevant | not relevant | not relevant | not relevant |
| **14.6. Special precautions for user** | | | |
| not relevant | not relevant | not relevant | not relevant |

* **14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

## SECTION 15: Regulatory information

* **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

### 15.1.1. EU legislation

**Other regulations (EU):**

This product is not assigned to a hazard category.
Safety data sheet available on request.

### 15.1.2. National regulations

### [DE] National regulations

**Störfallverordnung (12. BImschV)**

**for substances contained in the product:**

This product is not assigned to a hazard category.

**Technische Anleitung zur Reinhaltung der Luft (TA-Luft)**

**Remark:**

To follow: 5.2.5

**Water hazard class**

**WGK:**

2 - obviously hazardous to water

**Source:**

Self-classification (mixture; calculation rule).
Identification number 436

**Technische Regeln für Gefahrstoffe**

TRGS 510
TRGS 500

**Berufsgenossenschaftliche Vorschriften (DGUV-Vorschriften)**

Berufsgenossenschaftliche Informationen (DGUV-Informationen) 868
Berufsgenossenschaftliche Regeln (DGUV-Regeln) 189, 190, 192, 195

**Other regulations, restrictions and prohibition regulations**

Altöl-Verordnung (AltölV)

### [DK] National regulations

**Other regulations, restrictions and prohibition regulations**

Dänemark: Bekendtgørelse af lov om arbejdsmiljø: Beskæftigelsesministeriets lovbekendtgørelse nr. 1072 af 7. september 2010
Lister over stoffer og processer, der anses for at vaere kraeftfremkaldende

### [FR] National regulations

**Other regulations, restrictions and prohibition regulations**

Frankreich: Tableaux de maladies professionelles
Nomenclature des installations classées pour la protection de l'environnement
Articles L. 4523-1 à L. 4523-17, L. 4611-1 à L. 4614-16, R. 4523-1 à R. 4523-17 et R. 4612-1 à R. 4615-21 du Code du travail

### [NL] National regulations

**Other regulations, restrictions and prohibition regulations**

Niederlande: Lijst vank kankerverwekkende, mutagene en voor de voortplanting giftige stoffen (SZW)
Algemeene beoordelingsmethodiek Water (ABM)
Nederlandse emissierichtlijn (NeR)
NIET-Limitatieve lijst an voor de voortplanting giftige stoffen - Borstvoeding
NIET-Limitatieve lijst an voor de voortplanting giftige stoffen - Vruchtbaarheid

NIET-Limitatieve lijst an voor de voortplanting giftige stoffen - Ontwikkeling
SZW-lijst van kankerverwekkende stoffen
SZW-lijst van mutagene stoffen
Wet van 18 maart 1999, houdende bepalingen ter verbetering van de arbeidsomstandigheden (Arbeidsomstandighedenwet)
Wet op de ondernemingsraden 1971

### [CH] National regulations

**Other regulations, restrictions and prohibition regulations**

Mengenschwelle (Schweiz - StFV)
Gefahrencode
Brandverhütung, BVD (Schweiz)

### [SK] National regulations

**Other regulations, restrictions and prohibition regulations**

Zákon č. 67/2010 Z.z., o podmienkach uvedenia chemických látok a chemických zmesí na trh a o zmene a doplnení niektorých zákonov (chemický zákon).
Zákon č. 124/2006 Z. z. o bezpečnosti a ochrane zdravia pri práci a o zmene a doplnení niektorých zákonov.
Zákon NR SR č. 355/2007 Z.z., o ochrane, podpore a rozvoji verejného zdravia a o zmene a doplnení niektorých zákonov, v znení neskorších predpisov.
Nariadenie vlády SR 471/2011 Z.z., ktorým sa mení nariadenie vlády Slovenskej republiky č. 355/2006 Z. z. o ochrane zamestnancov pred rizikami súvisiacimi s expozíciou chemickým faktorom pri práci, Príloha č.1.
Zákon č. 79/2015 Z.z. o odpadoch v znení neskorších predpisov.
Vyhláška MV SR č. 96/2004 Z.z., ktorou sa ustanovujú zásady protipožiarnej bezpečnosti pri manipulácii a skladovaní horľavých kvapalín, ťažkých vykurovacích olejov a rastlinných a živočíšnych tukov a olejov.
Zákon NR SR č. 137/2010 Z.z. o ovzduší v znení neskorších predpisov.
Zákon č. 319/2013 Z.z. o pôsobnosti orgánov štátnej správy pre sprístupňovanie biocídnych výrobkov na trh a ich používanie a o zmene a doplnení niektorých zákonov (biocídny zákon).

## 15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

## * 15.3. Additional information

No data available.

# SECTION 16: Other information

## * 16.1. Indication of changes

| | |
|---|---|
| 1.3. | Details of the supplier of the safety data sheet |
| 1.4. | Emergency telephone number |
| 2.2. | Label elements |
| 3.2. | Mixtures |
| 6.1. | Personal precautions, protective equipment and emergency procedures |
| 7.1. | Precautions for safe handling |
| 8.1. | Control parameters |
| 8.2. | Exposure controls |
| 9.1. | Information on basic physical and chemical properties |
| 9.2. | Other information |
| 10.1. | Reactivity |
| 10.6. | Hazardous decomposition products |
| 11.1. | Information on hazard classes as defined in Regulation (EC) No 1272/2008 |
| 11.2. | Information on other hazards |
| 12.1. | Toxicity |
| 12.2. | Persistence and degradability |
| 12.3. | Bioaccumulative potential |
| 12.5. | Results of PBT and vPvB assessment |
| 12.6. | Endocrine disrupting properties |
| 13.1. | Waste treatment methods |
| 14.7. | Maritime transport in bulk according to IMO instruments |
| 15.1. | Safety, health and environmental regulations/legislation specific for the substance or mixture |
| 15.3. | Additional information |

| | |
|---|---|
| 16.1. | Indication of changes |
| 16.2. | Abbreviations and acronyms |
| 16.5. | List of relevant hazard statements and/or precautionary statements from sections 2 to 15 |

## * 16.2. Abbreviations and acronyms

| | |
|---|---|
| ACGIH | American Conference of Governmental Industrial Hygienists |
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| CAS | Chemical Abstracts Service |
| CLP | Classification, Labelling and Packaging |
| DNEL | derived no-effect level |
| $EC_{50}$ | Effective Concentration 50% |
| ES | Exposure scenario |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods |
| IMO | International Maritime Organization |
| $LC_{50}$ | Lethal (fatal) Concentration 50% |
| $LD_{50}$ | Lethal (fatal) Dose 50% |
| MAK | Maximum concentration in the workplace air (CH) |
| NFPA | National Fire Protection Association |
| NIOSH | National Institute for Occupational Safety & Health |
| NOEC | No Observed Effect Concentration |
| OECD | Organisation for Economic Cooperation and Development |
| OSHA | Occupational Safety & Health Administration |
| PBT | persistent and bioaccumulative and toxic |
| PNEC | Predicted No Effect Concentration |
| REACH | Registration, Evaluation and Authorization of Chemicals |
| RID | Dangerous goods regulations for transport by rail |
| TRGS | Technische Regeln für Gefahrstoffe |
| UN | United Nations |

See overview table at www.euphrac.eu
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

## 16.3. Key literature references and sources for data

EC 1907/2006 - REACH Regulation
1272/2008 EC - Regulation on classification, labeling and packaging of substances and mixtures, and amending Directives 67/548/EEC and 1999/45/EC and Regulation (EC) No 1907/2006
Regulation (EC) No 1907/2006 (REACH), Annex II
European Chemicals Agency (ECHA), C & L classification and labeling inventory
European Chemicals Agency (ECHA), ECHA CHEM Registered substances
OECD The Global Portal to Information on Chemical Substances (ChemPortal)
Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA): GESTIS substance database and International limit values for chemical substances
Federal Environment Agency, Section IV 2.4: Documentation and Information Centre substances hazardous to water Rigoletto (catalog substances hazardous to water)

## 16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

| Hazard classes and hazard categories | Hazard statements | Classification procedure |
|---|---|---|
| Hazardous to the aquatic environment *(Aquatic Chronic 3)* | H412: Harmful to aquatic life with long lasting effects. | Calculation method. |

## * 16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15

| Hazard statements | |
|---|---|
| H301 | Toxic if swallowed. |
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |
| H331 | Toxic if inhaled. |

| **Hazard statements** | |
|---|---|
| H360F | May damage fertility. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |

## 16.6. Training advice

No data available

## 16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

* Data changed compared with the previous version.